

## ABSTRACT OF THE DISCLOSURE

The present invention relates to the non-invasive use of a luminescent compound to detect and measure concentrations of oxygen dissolved in a rigid container, especially a bottle, a tray, a carton, a lidstock associated with a tray, a stand up pouch, or a paper-board container. The measurement is made independent of the oxygen concentration of the surrounding atmosphere. The invention is especially useful as a quality assurance check to verify oxygen scavenger activation during the assembly of bottled products, and modified atmosphere and vacuum packages. The method according to the invention is faster and less wasteful than previous methods that rely on measuring oxygen concentration within the headspace of an assembled package.